

## CLAIMS

We Claim:

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1. A method of enhancing antimicrobial defense, comprising administering an effective amount of a therapeutic composition to a host suspected of having a microbial infection, said composition comprising a product of the 5-lipoxygenase pathway.
2. The method of Claim 1, wherein said microbial infection is bacterial pneumonia.
3. The method of Claim 1, wherein said product of the 5-lipoxygenase pathway comprises a leukotriene.
4. The method of Claim 3, wherein said leukotriene is leukotriene B<sub>4</sub>.
5. The method of Claim 3, wherein said leukotriene is a cysteinyl leukotriene.
6. The method of Claim 5, wherein said cysteinyl leukotriene is selected from the group consisting of leukotriene C<sub>4</sub>, leukotriene D<sub>4</sub> and leukotriene E<sub>4</sub>.
7. The method of Claim 1, wherein said administering comprises pulmonary administration.
8. The method of Claim 7, wherein said pulmonary administration is by aerosolization of said therapeutic composition.
9. The method of Claim 1, further comprising the co-administration of an antibiotic to said host.

10. The method of Claim 1, wherein said host is an animal.

11. The method of Claim 1, wherein said host is a human.

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12. A method of treating a bacterial infection, comprising administering an effective amount of a therapeutic composition to a host suspected of having a bacterial infection, said therapeutic composition comprising a leukotriene.

13. The method of Claim 12, wherein said bacterial infection is bacterial pneumonia.

14. The method of Claim 12, wherein said leukotriene is leukotriene B<sub>4</sub>.

15. The method of Claim 12, wherein said leukotriene is a cysteinyl leukotriene.

16. The method of Claim 15, wherein said cysteinyl leukotriene is selected from the group consisting of leukotriene C<sub>4</sub>, leukotriene D<sub>4</sub>, and leukotriene E<sub>4</sub>.

17. The method of Claim 12, wherein said administering comprises pulmonary administration.

18. The method of Claim 17, wherein said pulmonary administration is by aerosolization of said therapeutic composition.

19. The method of Claim 18, further comprising the co-administration of an antibiotic to said host.

20. The method of Claim 12, wherein said host is an animal.

21. The method of Claim 12, wherein said host is a human.

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22. A solution for the treatment of a microbial infection, said solution comprising a sterile liquid vehicle and a leukotriene dissolved in said sterile liquid vehicle.

23. The solution of Claim 22, wherein said leukotriene is leukotriene B<sub>4</sub>.

3 24. The solution of Claim 22, wherein said leukotriene is a cysteinyl leukotriene.

5 4 25. The solution of Claim 24, wherein said cysteinyl leukotriene is selected from the group consisting of leukotriene C<sub>4</sub>, leukotriene D<sub>4</sub>, and leukotriene E<sub>4</sub>.

5 26. The solution of Claim 22, wherein said solution is aerosolized.

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